Assessment of some hematological parameters of mortuary workers exposed to embalming chemicals in some mortuaries in Anambra state, Nigeria

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The toxicity of embalming chemicals especially formaldehyde to human system including carcinogenicity and other adverse health effects have been reported. This study was designed to ascertain the possibility of exposure to these chemicals in the disruption of hematopoietic functions. 100 apparently healthy individuals (all males) were recruited for this research. Out of this number, 20, who were not mortuary workers and thus not exposed to the embalming chemicals served as the control. The test groups were categorized as follows: 48 workers exposed to the chemicals for 1 to 7 years; 13 workers of 8-14 years exposure and 19 workers exposed for 15 years and above. The results of this study showed that the alterations in the peripheral blood cell counts and Hemoglobin (HB) levels of the exposed mortuary workers when compared with the control were not statistically significant (P>0.05). However, there was strong and statistically significant negative correlation (r=0.263, P<0.05) between the total white blood cell (TWBC) count and the duration of exposure to the chemicals. There was also significant variation (P<0.05) in lymphocytes (LYM), neutrophils (NEUT) and mixed field differential (MXD) counts among the exposed groups. The blood film results showed no significant alteration in the number and morphology of the blood cells. This research has succeeded in demonstrating that exposure to embalming chemicals is capable of disrupting hematopoietic functions.

Biography
Winifred Onwurah has completed her Master’s degree from University of Nigeria and currently pursuing her Doctoral studies in the Department of Hematology, Nnamdi Azikiwe University, Nigeria.

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